

Technical Abstract

Neuroblastoma accounts for 8 - 10% of all childhood malignancies. Children who present over one year of age usually have widely metastatic disease. Their prognosis is poor with only 20 - 30% survival despite intense conventional therapy. Previous clinical trials with cytotoxic T-lymphocytes (CTLs) in other malignancies or infections have demonstrated CTLs to be safe, persistent in the circulation and have promise in anti-tumor or anti-viral effect. CTLs were genetically marked with neomycin resistance (Neo^R) gene delivered by vectors of the LN backbone, which has allowed monitoring of the transferred CTLs. We have been able to generate CTLs which recognize and kill neuroblastoma tumor cells *in vitro*. This protocol proposes to generate cytotoxic T-lymphocytes specific for patient's tumor, mark them with the Neo^R gene, and transfer them back to the patient as a phase I study.